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SchoolNet

Celebrating 10 years of e-Learning at the Speed of Life

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Featuring ...

Leading the ICT Race
at J. Percy Page School

Removing Wires,
Removing Boundaries

The Best of Both Worlds

Canada

SchoolNet

Celebrating 10 years of e-Learning at the Speed of Life



The Fall 2003 issue of the *SchoolNet Magazine* marks SchoolNet's 10th anniversary — celebrating 10 years of e-learning at the speed of life.

Filled with articles showcasing best practices and innovative uses of information and communications technologies (ICT) for learning, this issue will help you start and complete exciting, creative and collaborative Internet-based classroom projects.

To complement the feature articles, you will find new and interesting pieces on five distinct themes linked directly to SchoolNet's objectives:

- **The Net and Beyond** for connectivity
- **Handy-Dandy Canadian Resources** for content
- **The Learning Curve** for professional development
- **Outside the Box** for innovation and research
- **Look Before You Leap** for social issues

This one-of-a-kind Canadian resource is also available online at www.schoolnet.ca/magazine

SchoolNet Magazine was designed to help educators integrate ICT into the classroom. We hope you enjoy it!

We appreciate your feedback.
Call 1 800 575-9200,
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e-mail schoolnet@ic.gc.ca
to let us know what you think
of *SchoolNet Magazine*.

See *SchoolNet Magazine's* online version at www.schoolnet.ca/magazine

The Net and Beyond 13

Telesat Trials Open New Worlds for Remote Schools

Students at 13 remote schools in Ontario, Quebec, Newfoundland and Labrador take advantage of videoconferencing to collaborate on projects, take music lessons and mentor each other in Web site creation.

Handy-Dandy Canadian Resources 14

Celebrating 10 Years with Teachers' Top 10 Choices

Canadian teachers select the 10 top educational Web sites to celebrate SchoolNet's 10th anniversary.

The Learning Curve 17

Sharing Skills and Knowledge Through Mentoring

Teachers are getting up to speed with technology using a traditional approach — peer mentoring — as an alternative to costly training programs.

Outside the Box 19

No Talking? Not Here! Welcome to the Innovative Library

Libraries are no longer just for gathering print material. Today's libraries include digital book collections, CD-ROMs, journal articles and more to better prepare students for the knowledge-based economy.

Look Before You Leap 20

Bullying: Confronting the Issue

Schools are turning to the Internet to combat bullying in classrooms and schoolyards.

Features

4 Leading the ICT Race at J. Percy Page School

High-speed Internet and strong partnerships have helped an Edmonton high school merge from the slow to the fast lane on the Information Highway.

6 Removing Wires, Removing Boundaries How Wireless Technologies are Changing Canadian Education

Teachers are disconnecting the wires to help connect their students to flexible and powerful learning opportunities.

8 The Best of Both Worlds

An Internet high school on the Weagamow Lake First Nation is eliminating a tough decision for many Aboriginal teens: allowing them to stay home to finish school instead of having to leave their communities.



Site Provides Tools for Young Entrepreneurs

The SchoolNet Youth Entrepreneur Web site provides educators and students with useful links, resources, tools and information on how to start a business.

7

Take Part in a GrassRoots Sponsored Theme Project!

Innovative and interactive online learning activities for your classroom.

16

NetCorps Canada International: A Valuable Employment and International Development Tool

NetCorps 1000th intern creates a video documentary while on assignment in Senegal to showcase the exciting opportunities that await volunteers during an internship.

18

Ask an Expert

Network with your peers to get your ideas off the ground.

21

SPONSORS

Cisco Systems Canada Co.	10
AOL Canada Inc.	12
Ericsson	15
Bell	18
TransCanada	19
CN	21
Investor Education Fund.....	21
Canada's SchoolNet	
GrassRoots Initiative	Back Cover

ADVERTISERS

Citizenship and Immigration Canada	5
Virtual Museum of Canada	11
Indian and Northern Affairs Canada	15

Cover photo: Kelly Henderson

Kitigan Zibi Kiknamadinan is located in Maniwaki, Quebec and is a member of the SchoolNet Network of Innovative Schools.





Editors' Note

Happy 10th Anniversary, SchoolNet!

This issue of *SchoolNet Magazine* is all about celebration. This fall, we celebrate Industry Canada's SchoolNet's 10th anniversary — 10 years of fruitful partnerships between the federal and provincial governments, the private sector and the Canadian education community.

After 10 years, the information and communications technology (ICT) revolution continues unabated. Educators have continued to seize on every possibility, bringing the Information Highway into schools in new and exciting ways. SchoolNet is proud of its contribution to providing educators with innovative learning opportunities to help young Canadians build the skills they need to become leaders in the new economy.

In this special anniversary issue, *SchoolNet Magazine* looks at how Canadian schools continue to push the envelope.

You'll learn about how 13 rural and remote schools in Newfoundland and Labrador, Ontario and Quebec have benefited from the Telesat Satellite Multimedia Trials for Schools. In one case, students at Ulluriaq School in northern Quebec have been enjoying interactive violin lessons with a teacher from Buckingham, Quebec, which is near Ottawa.

In a different part of the country, J. Percy Page School in Edmonton is pioneering telenet learning conferences that link teachers, students and guest speakers across Canada. By hearing opposing views on issues such as the Kyoto Protocol, students are learning to think critically and make more informed judgments.

Find out how two schools disconnected wires to help connect their students. By introducing wireless laptops, the schools have liberated students from the confines of the computer lab and taken a giant leap toward integrating ICT into everyday learning.

Read about a mentoring program that enables teachers who are comfortable working with new technologies to share expertise with their peers.

Another article about transferring knowledge goes further afield, celebrating the 1000th volunteer of NetCorps Canada International — an initiative that helps young people share ICT skills in developing countries around the world, while gaining valuable work experience.

Keewatinook Internet High School (KiHS) is a heart-warming Canadian success story. Traditionally, students in remote Aboriginal communities in northern Ontario have had to leave home to attend high school. The culture shock and lack of community support often led many young people to drop out. Now, through KiHS, these students can attend grades 9 and 10 in their own communities.

In Saskatchewan, students at Whitewood School and Broadview School have used ICT to explore the age-old problem of bullying.

As you can see, this anniversary issue of *SchoolNet Magazine* is packed with informative articles about the dazzling array of ICT applications in Canadian schools. We hope you enjoy it.

Here's to another decade of innovative learning!

Sheri Brink and Isabelle Poitras
Co-editors

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Sheri Brink and Isabelle Poitras

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Message from the Minister of Industry



In 1993, with the Internet still in its infancy, Industry Canada launched Canada's SchoolNet, an ambitious program to connect all Canadian schools and libraries to the Internet by March 31, 1999.

From the beginning, Industry Canada recognized the need to work with provincial and territorial governments, the educational community and the private sector to reach SchoolNet's goal. It speaks highly of the cooperation among these diverse partners that on March 30, 1999 — a day ahead of schedule — Canada became the first country in the world to connect public schools and public libraries to the Information Highway. To date, some 16 000 K-12 schools and 3500 libraries across the country are connected thanks to SchoolNet.



With the goal of connectivity accomplished, the program moved towards integrating information and communications technologies (ICT) into the learning process. To that end, SchoolNet worked with its partners in its second phase to extend connectivity from schools into classrooms, increasing the availability of online multimedia educational resources. The new tools have transformed the educational experience for both teachers and learners alike.

Ten years on, SchoolNet comprises a host of interrelated initiatives, all designed to equip young Canadian learners with the skills they need to flourish in the knowledge-based economy. Since 1995, Industry Canada has invested \$223 million in such worthwhile initiatives as:

- Canada's SchoolNet GrassRoots initiative, which promotes collaborative Internet-based projects for K-12 students;
- First Nations SchoolNet, which provides First Nations schools under Government of Canada jurisdiction with computers, Internet access and related mentoring;
- Computers for Schools, which collects, repairs and refurbishes surplus computers donated by government and businesses and then distributes them to Canadian schools and public libraries; and
- Canada's SchoolNet Network of Innovative Schools, which encourages member schools to share their innovative learning practices and mentor other schools in the use of ICT.

This support has translated into some 35 000 GrassRoots projects, 425 000 refurbished computers donated to schools, and many other significant accomplishments.

By preparing young Canadians for the knowledge economy, SchoolNet contributes to the Government of Canada's national strategy to build a more innovative Canada, helping to foster a culture of innovation, excellence and productivity, and develop and retain Canada's competitive edge. As we press ahead on the ever-expanding Information Highway, our goal is nothing less than to stay in the passing lane.

I would like to offer my heartfelt congratulations to all those who have made Canada's SchoolNet such an unprecedented success over the past 10 years — particularly the teachers and the learners. You are trailblazers. I encourage you to forge ahead with e-learning over the next decade, and take us all on another thrilling ride.

Allan Rock
Minister of Industry

Canada's SchoolNet
Celebrating 10 years

Leading THE ICT RACE

at J. Percy Page School

By Karen Andrews and Stephanie Mitchell

Paul Osbaldeston has a question about the Kyoto Protocol, so he clicks on an icon on his computer desktop and a camera pans across the library to focus on the Grade 11 student. He looks straight into the camera and talks to his counterpart, sitting in another classroom across the country.

Osbaldeston is taking part in a real-time videoconference that links students, teachers and guest speakers across the country.

This is the Global Classroom program — a regular part of the learning experience at J. Percy Page School in Edmonton.

Only six years ago, J. Percy Page was 10 years behind the technology race. The school had a dysfunctional jumble of Macs and PCs. Only two computers were connected to the Internet, and none of the computers could talk to one another.

Staff, students and the parent council knew that things had to change. They recognized that information and communications technologies (ICT) are an integral part of the everyday world, and that students need ICT skills to succeed in the knowledge economy.

That realization, along with newly mandated ICT outcomes in Alberta curricula, brought the school community together to develop an ambitious five-year technology plan for the school.

The plan called for programs and partnerships that would develop online

learning, and connect teachers and students to the best learning opportunities in the world.

In the summer of 1998, J. Percy Page launched a partnership with Shaw Communications through which Shaw provided the technology, connectivity and training, and the school provided a test bed for Shaw's new Fibreone network service. Shaw also sponsored three staff members to go to a train-the-trainer session in Colorado. In turn, these teachers trained school staff in how to integrate ICT into regular classes. The training sessions became so popular that J. Percy Page soon opened them to staff from other schools and established a technology mentorship program.

Staff also created the student-centred, ICT-focussed Global Classroom, a program accredited by Alberta Learning.

The Global Classroom connects students with other students and experts around the world as they research multidisciplinary topics, and students are eager to participate. Global Classroom started with nine students, two years later it had 80.

Today, J. Percy Page has met all of its major ICT goals. Susan Barnoff, a project coordinator for educational services at Shaw Communications, is amazed at how quickly J. Percy Page went from losing to leading the technology race.



"Now, they're on the cutting edge," she says. "We consider them to be leaders, especially in initiatives like broadband learning. They're very innovative, and very dedicated to what they do."

She believes the key to J. Percy Page's success is the school's great enthusiasm and flexibility, as well as its community-based philosophy — the school regularly takes up worthy causes in the community.

Osbaldeston, who has now graduated from the school, agrees. "One of the most important parts of ICT at J. Percy Page is that it enables students to hear and consider other people's opinions."

For example, in the Kyoto videoconference he participated in last year, he heard various views about the Kyoto Protocol from students and guest speakers across the country. That broad discussion changed his thinking.

Originally, he thought the Kyoto Protocol was a good idea but would be too difficult to implement. He says that with parents working in the oilfields, about half of J. Percy Page students were against implementing the protocol.

He was surprised to find that about 90 percent of students in the rest of the country were in favour of it. "They brought up a lot of viewpoints we didn't discuss here in Alberta. It really helped bring to light some issues that we hadn't considered before."

So now what does he think? "I think it's possible, if the entire country's committed to it."

Osbaldeston says that having access to videoconferencing technology through the Global Classroom also helped his teachers become better informed because it was easier for them to share ideas.

Social Studies teacher Richard Briggs was one of the teachers who participated in the Kyoto videoconference. He says ICT is an extremely effective tool teachers can add to their toolbox. "It's so effective because it's like dangling a carrot in front of a kid's face and saying, 'We're going to do something completely different that you haven't seen before.' There's a 'wow' factor there."

Briggs says the best part of having more ICT is that the school can connect with other people so easily. "It makes a huge difference when you have that kind of technology — you can meet face-to-face, even though you're in different provinces."

He explains that the Global Classroom is both its own class and can be integrated into other classes in the school. In the actual Global Classroom, students learn the basics of videoconferencing, do project work, and then present their findings.

"The Global Classroom template, though, is something we can apply to any subject," Briggs says. "So, for example, in Mathematics, we have a collaborative project between Edmonton and Toronto where students have shared information on combinamatrix."

Briggs says he now spends part of every day lining up collaborative projects. He says J. Percy Page is trying to include more Global Classroom projects in other subject areas.

Amitpaul Sangha is one of the students who is benefiting from this increased ICT focus. When he was in the Global Classroom, he learned about setting up

the technology and using it to do research and link with other schools. He says the Global Classroom helps students and teachers learn more and understand more. "And, students' marks have been going up. It's a win-win situation."

Amitpaul also believes he will be able to use his ICT experience in the future. He has been accepted into the Engineering program at the University of Alberta, so he knows his ICT knowledge will be particularly useful to him.

Teachers and students at J. Percy Page aren't content with only this much success, though. They're still looking for ways to integrate even more ICT into the classroom.

To teacher Briggs, the Global Classroom is only the beginning: "The beauty of it

is we're just getting started. We're barely scratching the surface with this. The fact that the Global Classroom is here really blazes the trail and shows teachers what's possible."

Not content to rest there, J. Percy Page's state-of-the-art technology facility, the TeleLearning Centre, is expected to open in February 2004. To find out more about the centre, telelearning and how you can get involved, go to www.jpercypage.com or send an e-mail to karen.andrews@epsb.ca

Karen Andrews is TeleLearning Coordinator for the TeleLearning Centre at J. Percy Page School. Stephanie Mitchell is a journalist on special assignment with SchoolNet.

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Removing Wires, Removing Boundaries

HOW WIRELESS TECHNOLOGIES ARE CHANGING CANADIAN EDUCATION

By Kristen Torno

As teachers, you all know your students' reaction when you say, "We're going to the computer lab." It's an exciting time — students get to leave their conventional learning environment to explore new technologies. Students truly see the use of computers for research purposes and projects as a fun addition to their main workload.

Over the past several years, teachers have been picking up on this, and have begun to set a new trend for the use of technology in schools: they're disconnecting wires to help connect their students.

MEET THE INNOVATORS

In the late 1990s, having information "where and when needed" was the goal of both Tom Baines Middle School in Calgary and Bairdmore Elementary School in Winnipeg.

Fortunately, Tom Baines was built in 1997 with the intent of creating an environment conducive to collaborative learning. Clusters of classrooms grouped around their own central computer lab gave students constant access to several computers no matter where their class was located. Although not housing state-of-the-art equipment, the facilities were an impressive starting point for the school.

Unlike Tom Baines, Bairdmore Elementary School was designed in the spirit of a more traditional learning environment. For Bairdmore, it was not an issue of upgrading an already optimal collaborative environment. It was, paradoxically, how to optimize the use of technology when both space and money were limited. With a student body of more than 500, one third of the library had already been transformed into a computer lab so students could have access to technology at all times.

With limited resources and space, both schools saw a need for improvement, a

need to drive technology away from its centralized environment and into the classroom where it could be made more relevant. It was time to remove the restraints — the wires — that were holding technology back from its optimal use.

EXPECTATIONS

So what can you expect with wireless technology? What does it allow students to do? As Bairdmore teacher-librarian Nell Ududec says, "Going wireless simply makes technology more relevant. Rather than seeing the computer lab as a separate entity from the classroom, students are able to use computers at their desks while doing actual class work."

Bairdmore's "Computers on Wheels System" is a collection of 16 wireless laptops mounted on a cart that can be wheeled around the school. The cart contains a port and a networking device that allow the laptops to connect to the Internet without having to be wired to traditional servers. They just have to be connected to the cart.

Tom Baines took this concept one step further. Instead of installing networking cards into its portable laptop cart, they installed them in the walls. This way, laptops can connect to the Internet anywhere in the school, not just near the cart.

Richard Tapp, a teacher at Tom Baines, says that wireless technology allows the elimination of the classic "we're going to the computer lab, so it's time to have fun" syndrome. By having information where and when needed, "technology is actually seen as a tool instead of a toy," says Tapp.

HOW THEY DID IT

How did two very different schools plan these innovative systems and bring them to life, starting from scratch?

Both schools received funding through the SchoolNet Network of Innovative Schools (NIS). Launched in 1998, NIS is an Industry Canada initiative that encourages networking, and the effective development and use of technology in Canada's education system. The Network offers up to \$10 000 per year for up to three years to Canadian elementary and secondary schools that use information and communications technologies in meaningful and imaginative ways to improve learning.

Aside from NIS funding, which paid for the majority of the equipment, both schools did and continue to do a substantial amount of fundraising through their parent advisory councils. "At our school, we have tremendous support from all the staff and parents. Everybody was very excited about the possibilities that this new technology presented for our students. They were willing to do whatever they could to support it," says Tapp.

Once the grants were in place, installing and implementing the system was, astonishingly, the easiest step of the project.

THE FINAL WORD

By giving students the freedom to learn in new and innovative ways, wireless technology allows students to partake in technology-aided projects that best meet their specific learning needs. This helps create an individualized approach to learning and also encourages creativity. Many teachers hope that once children

are given the freedom to experiment and tailor their learning to their individual strengths, they will gain self-confidence and a true love for learning.

Both Tom Baines Middle School and Bairdmore Elementary School are extremely happy with the progress they have made with wireless technology. The simple removal of wires has allowed both schools to completely redefine their classroom environment, while remaining true to conventional learning goals. They are able to create a comfort level for their students using technology, which is simply impossible to achieve with a centralized computer lab.

Both schools communicate an important message many teachers hope to hear: in the 21st century, information technology is not an entity in and of itself, but instead a tool that must be integrated with other goals to be put to its best use.

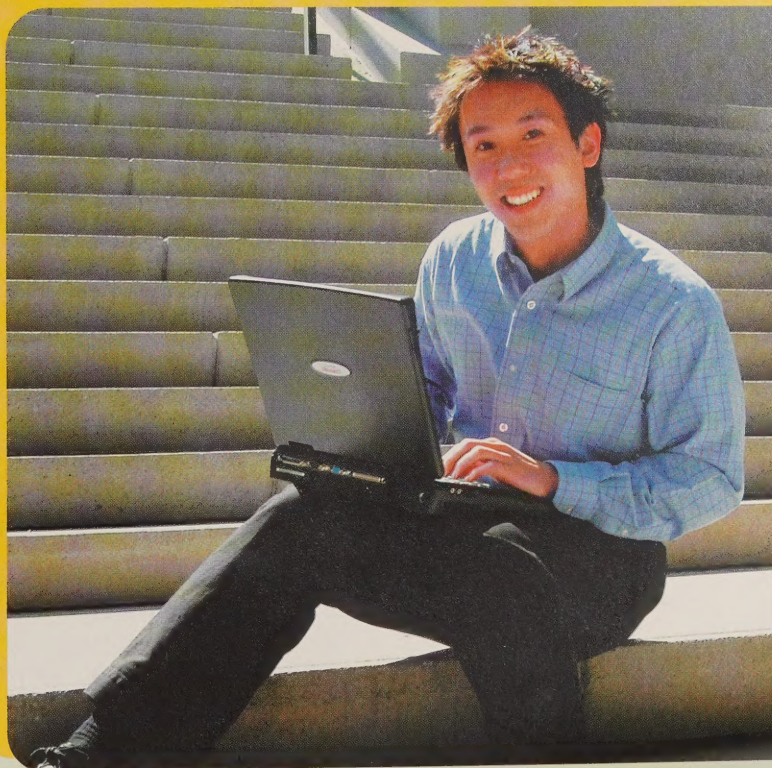
Kristen Torno is on special assignment with Canada's SchoolNet.

Site Provides Tools for Young Entrepreneurs

We've all heard it said that you can't get a job without experience and you can't get experience without a job.

Young people across Canada are solving this age-old dilemma by creating their own opportunities as entrepreneurs.

Canada's SchoolNet is proud to support this entrepreneurial spirit with the SchoolNet Youth Entrepreneur Web site (<http://entrepreneurship.schoolnet.ca>). This site provides educators and students with useful links, resources, tools and information on how to start a business.



The BEST of BOTH WORLDS

By Mark Foss

Last year, 14-year-old Kendra Quequish, who lives on the Weagamow Lake First Nation reserve in Northern Ontario, was faced with a common dilemma for Aboriginal students: quit school or leave home.

In many small First Nations communities, there are no high schools. Aboriginal students in Northern Ontario who want to go beyond Grade 8 leave the reserve and their families behind, travelling to Thunder Bay to attend school. The culture shock, combined with a lack of community support, often creates difficulties for Aboriginal students, and many drop out. For the past four

years, however, a unique high school has been giving students the chance to pursue secondary studies right in their own communities.

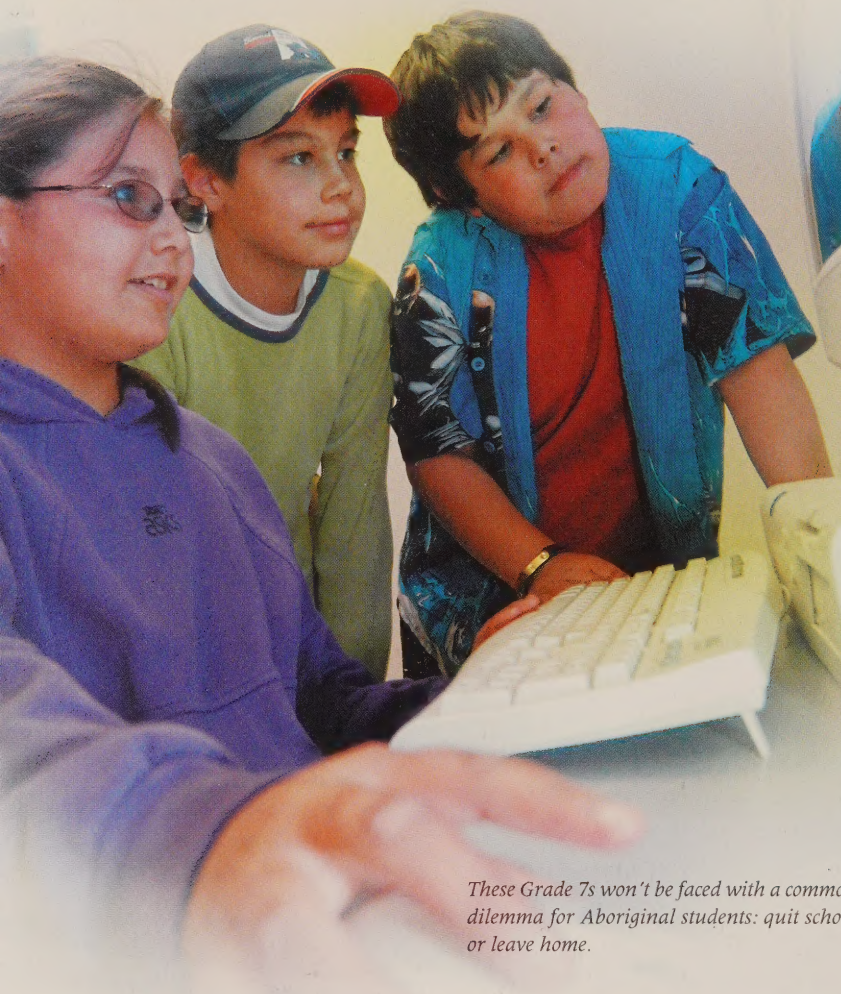
Keewaytinook Internet High School (KiHS) is the first Internet high school approved by the Ontario Ministry of Education. In 13 communities, students attend a designated classroom that's been wired for the Internet. A teacher is on hand to act as mentor and instructor. Larger classes also have a classroom assistant to handle technical issues and support the teacher. Students access lessons online, and communicate via e-mail with teacher-mentors in other communities. In this way, KiHS integrates a traditional face-to-face classroom setting with Internet course delivery, providing the best of both worlds.

For Quequish, KiHS provided just the opportunity she needed to stay in school and at home. "When Kendra was in Grade 8, I thought the only option was to send her out," says her mother, Anna Marie. "Soon after, I heard there was an Internet high school and I enrolled her. I'm glad I did because she's gotten all the credits so far, which she probably wouldn't have gotten in Thunder Bay." Quequish has acquired 6.5 credits from KiHS and is attending regular high school in Thunder Bay this fall.

A MODEL FOR ONLINE EDUCATION

"Our main goal is to allow students to stay at home longer," says Darrin Potter, Principal of KiHS. "That extra couple of years interacting with parents, elders and peers in their own community is extremely important."

These Grade 7s won't be faced with a common dilemma for Aboriginal students: quit school or leave home.



Potter, who taught science for KiHS in the 2002–2003 school year, says the school is slowly building a foundation. Initially, the school only offered Grade 9 courses. By September 2002 — its third year of operation — it had Ministry of Education approval to offer Grade 10 courses as well. Eventually, the school hopes to offer a complete high school curriculum. “We’re not ready to expand until we have the Grade 9 and 10 programs solidified in the community, so that it’s really flowing smoothly,” says Potter.

The program has also expanded into new communities each year, which stretches administrative resources. “It’s harder to keep track of what’s going on when someone can’t walk into your office,” says Potter. “If things go really well in the next two or three years, we’ll request to expand the program beyond the 13 communities. Unless one school drops out, there isn’t any room to expand for now.”



KiHS offers four nine-week terms, and students take two courses each term; the school has found that students have more success when they concentrate on a few subjects at a time. Last year, the school offered 19 compulsory and optional courses ranging from Mathematics and Information Technology in Business to Literacy Skills and Aboriginal Cultures. When students do not have a computer at home, they can use computers in the classroom for a few hours a night, four nights a week.

SHARING Lessons and Technology

KiHS Principal Darrin Potter offers these words of advice for First Nations who want to pursue online secondary education.

- Work closely with the community. Make sure people want the program, and get the infrastructure in place so you’re not running around trying to connect schools for opening day. Kuh-ke-nah Network (K-Net), a demonstration project for Industry Canada’s Smart Communities program, has set up the satellite technology for KiHS, and provides ongoing technical support.
- Know what you’re up against and get your polices in place before you start.
- Find a model that works rather than inventing your own. With support from K-Net, KiHS created its own open source e-learning platform, incorporating existing communication tools such as chat rooms, discussion forums and Web page generators. KiHS is willing to share its platform with anyone.



“We’re trying to make the courses as interactive as possible,” says Potter. “At the same time, KiHS encourages teachers to develop lessons that are culturally relevant. A math assignment might have students to develop a budget for the community, for example, while an English student might have to interview an elder and write a profile.”

BENEFITING YOUNG AND OLDER ABORIGINALS ALIKE

The Internet program does not benefit students who have only dropped out from elementary school, says Darrin Quequish. It also allows for former students who dropped out of traditional high school.

Coty Kastern, who lives on the William First Nation reservation, has to travel a few minutes to reach the high school in Thunder Bay, but it was still a shock to her system. “I was having difficulties and getting a bad reputation at school,” says Kastern, who dropped out three years ago. “I’ve been smartened up.” Last September, in addition to taking Native Language courses through KiHS as her final Grade 10 credit, she took two Grade 11 courses through correspondence.

“I love the Internet approach,” she says. “I think it’s better than normal high school. You get your work and you just sit there and do it. Because of the Internet high school, I’m doing much better in my correspondence courses.”

Monica Kenequanash, a member of the North Caribou Lake First Nation, also had negative experiences with traditional high schools. The 17-year-old tried several high schools off-reserve, but none worked out for her. After leaving school for a year, she enrolled in KiHS and did extremely well last year. “I just decided to stay home and do it here,” she says.

Continues on page 10

TACKLING THE CHALLENGES

As with all northern schools, KiHS faces challenges. For Principal Potter, greater involvement of parents in their children's education is crucial to promoting regular attendance. "We encourage parents to visit the school more often," he says. "Some parents may be intimidated by the technology, but there's also curiosity. I think people in the North realize the Information Highway will be their link to the outside world in the future."

The school also struggles to attract First Nations teachers. "We've had First Nations applicants, but they are reluctant to move from their own community," says Potter. As a result, only two of 13 teachers are Aboriginal. Not surprisingly, both teach in their own communities. Down the road, as KiHS expands into other communities, it may attract more First Nations teachers who — like

their students — can pursue their goals without leaving home.

One of the two Aboriginal teachers is Craig Hardy, a member of the Fort William First Nation. Hardy teaches two Native Studies courses for KiHS from his base on the reserve and mentors up to 18 students. Last academic year about 15 showed up regularly, and 12 to 14 were "core students" who put in the hard work required to succeed.

As a member of the Fort William community, Hardy finds it easy to relate to the students and their needs, and to develop relationships with their parents. "I can knock on doors, and tell parents that their child is slacking off and needs to pull up his socks," he says.

To motivate students, Hardy helps them with career planning. "They don't see that education opens doors. Once that can be communicated, then motivation increases and attendance will inevitably improve."

No one needs to convince Mary Jane Jeremiah about the importance of education. If she could, she'd tell all students

in remote Ontario schools about the value of the Internet high school. The 29-year-old, who quit school at 17, now attends KiHS part time. Her goal is to finish her Grade 10 credits, move on to Grade 11, and then study nursing in Thunder Bay. Afterwards, she wants to return to the North Caribou Lake reserve.

"When I was in elementary school, they told me I was stupid and I didn't know anything," recalls Jeremiah. "Here I am now. I'm doing it, all by myself."

Thanks to information and communications technologies, First Nations students are making a leap into the future. This holds considerable promise, since these technologies are being adapted to meet Aboriginal cultural needs so students can cross not only physical but also time and scheduling barriers. To see the results, go to the KiHS Web site at www.kihs.knet.ca

Mark Foss is a special contributor to SchoolNet Magazine.

The Canada's SchoolNet GrassRoots initiative and Cisco Systems Canada Co. can help.

Canada's SchoolNet GrassRoots initiative is changing the way students learn. Through SchoolNet GrassRoots teachers and students throughout the country are creating online projects that help students develop valuable technical and life skills. Over 5 million Canadian students will have had the opportunity to participate by March 2004. At Cisco, we fully support this model of skills development.

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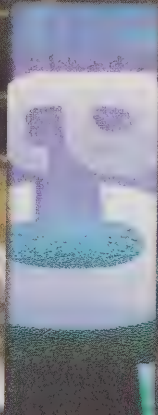
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matériel didactique.

Canada



Affaires indiennes
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Au cours de la prochaine année scolaire, Affaires indiennes et du Nord Canada, au nom du gouvernement du Canada, diffusera sur le Web quatre émissions en direct traitant des jeunes de collectivités autochtones d'un bout à l'autre du Canada.

Chaque émission durera environ 30 minutes. Cette série donnera aux étudiants des écoles secondaires un aperçu de la vie des jeunes dans une collectivité autochtone. Pendant le déroulement des émissions, les étudiants qui les regarderont sur le Web pourront adresser des questions à l'animateur par courriel.

Les émissions seront diffusées sur le Web entre octobre 2003 et février 2004. L'information relative aux endroits et aux thèmes sera confirmée au cours de l'été. Elle sera communiquée aux écoles secondaires par courriel au début de l'année scolaire.

Nous sommes actuellement à la recherche d'enseignants et d'éducateurs qui seraient intéressés à se préinscrire en vue de participer à ces activités. Si vous-même ou un enseignant que vous connaissez aimeriez que votre classe participe à ces activités, veuillez remplir le présent formulaire et l'envoyer par télécopieur ou par courriel à l'adresse suivante :

Branchons les jeunes du Canada

Affaires indiennes et du Nord Canada

10, rue Wellington, bureau 1900

Gatineau (Québec) K1A 0H4

Télécopieur : (819) 953-2305

Si vous désirez obtenir plus d'information, vous pouvez nous écrire par courriel à connex@ainc-inac.gc.ca ou téléphoner au 1 800 567-9604.

Émissions

en direct sur le Web

diffusées à votre école



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Canada



Indian and Northern
Affairs Canada

Affaires indiennes
et du Nord Canada

During the coming school year, Indian and Northern Affairs Canada, on behalf of the Government of Canada, will broadcast four live Web casts about youth from Aboriginal communities across Canada.

Each Web cast will last about 30 minutes. They will give high school students a chance to learn what it is like to be a youth living in an Aboriginal community. Students watching the Web cast will be able to email questions to the host while the Web cast is taking place.

The Web casts will be broadcast between October 2003 and February 2004. Details about the locations and themes will be confirmed over the summer. Information will be available to high schools early in the school year.

We are now looking for teachers and other educators who may be interested in pre-registering to take part in these events. If you, or a teacher you know, are interested in having your class involved, please fill in the form below and fax or mail it to:

Connecting Youth in Canada

Indian and Northern Affairs Canada

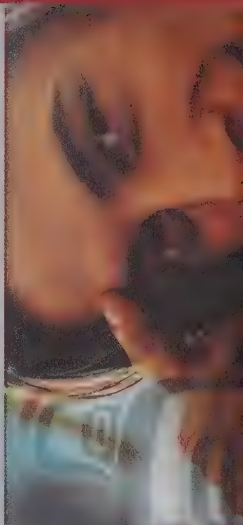
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LIVE Webcasts





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Vanessa D.
elementary school teacher
Grimshaw, Alberta

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To learn more, visit the Teachers' Centre at virtualmuseum.ca

Sunglasses were invented by the Inuit in the 1700s



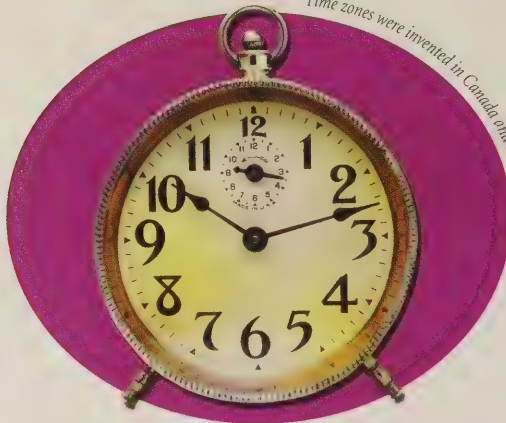
The electric lightbulb was invented in Canada in 1874



The telephone was invented in Canada in 1874



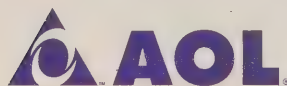
Time zones were invented in Canada and adopted in 1884



Create a Web-based celebration of Canada for your school.

Canada First

Whether it's sports, science, teaching or technology, Canadians have a proud history of leading the way. AOL Canada Inc. invites all Canadian K-12 teachers to participate in *Canada First*, a brand new SchoolNet GrassRoots theme project that helps teachers and students celebrate Canadian excellence. Whether your project looks at Canadian heroes and icons, explores Canadian history or examines current events, we want to hear from you. *Canada First* is your opportunity to share your Canadian story with other students and teachers across the country.



For complete details, check out
www.schoolnet.ca/grassroots/e/project.centre/theme/aol

Telesat Trials Open New Worlds for Remote Schools

By Doug Walker

THE PAST 18 MONTHS BROUGHT a unique learning experience to 13 rural and remote schools in Ontario, Quebec and Newfoundland and Labrador. The schools, geographically distant from one another, were linked together by ANIK E2 satellite during the Telesat Satellite Multimedia Trials for Schools.

Jointly sponsored and managed by Telesat, Industry Canada and businesses, educational institutions and other government departments, the trials allowed the schools to have high-speed Internet access, to participate in videoconferencing and remote application sharing, and to download and share multimedia on demand.

For a couple of extremely remote schools, this broadband connection was their first real taste of the Internet. Putting the Internet to pedagogical use was an exciting and rewarding challenge.

By far, videoconferencing was the most popular feature of the trials. Schools were quick to take advantage of the potential videoconferencing to take learning to new heights.

Immediately, schools initiated interschool sessions. Ideas travelled between schools in Newfoundland. There were topical interviews by student journalists and timely interschool debates. Virtual second-language exchanges using videoconferencing took place between schools in Newfoundland and Quebec. Schools shared pedagogical projects, such as water-powered rocketry and robotics. Several interschool videoconferencing sessions about different cultures were held.



Using videoconferencing, Ulluriaq School (in Kangisqualujuaq in northern Quebec) brought interactive violin lessons from a teacher in Buckingham, Quebec (near Ottawa) to its music-hungry students. New approaches to learning using collaborative teaching have been developed!

Schools experimented with another advanced use of videoconferencing, student-initiated peer-mentoring. Students at Bayside Secondary School in Quinte West, Ontario, and Pelican Falls First Nations High School in Sioux Lookout, Ontario, collaborated several times per week for several months using videoconferencing and real-time program sharing to build a new Web site for the Pelican Falls school.

Working alongside scientists from Telesat, the Communications Research Centre and the National Research Council to learn to use new technology was an eye-opener for students. Often, they experienced for the first time being part of the new technology design process. It was a valuable experience for the 13 schools to be able to make positive suggestions to the communications scientists and engineers.

For some schools, access to a satellite link made a night-and-day difference to their communities. These schools experienced new kinds of learning and enjoyed interactive access to aspects of the outside world otherwise not attainable.

Through interacting with one another, schools were able to discover other cultures too.

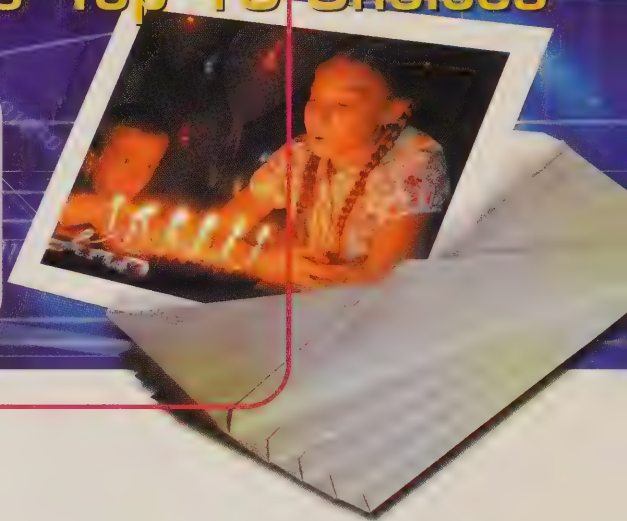
It's exciting to see the enormous difference new technologies such as broadband can make in the quality of people's lives.

Doug Walker is on special assignment with Canada's SchoolNet.

Celebrating 10 Years with Teachers' Top 10 Choices

By Bryce Fountain

IN CELEBRATION OF CANADA'S SCHOOLNET'S 10th anniversary, we asked teachers from across the country to submit their picks for the 10 top educational Web sites. Thanks to your input, we've compiled a list of truly great Canadian and international Web sites that will amaze, entertain and inform both you and your students!




KINDERART (www.kinderart.com/about.shtml)

KinderArt features more than 155 free art lesson plans that teachers and parents can use in the classroom or at home. The site includes lessons in drawing, painting, print-making, sculpture and textiles.



VIRTUAL MUSEUM OF CANADA (www.virtualmuseum.ca/)

With the click of a mouse, you can visit hundreds of museums across Canada. This site features an image gallery organized by topic, and extensive virtual exhibits. This resource will take you on a tour of Canadian history without ever having to leave the classroom.



MEDIA AWARENESS NETWORK (www.media-awareness.ca/)

We are bombarded by media messages every day. The Media Awareness Network is dedicated to educating youth on the influences and motivations of the media. This award-winning site hosts more than 300 lesson plans for educators, professional development resources for librarians and teachers, as well as tips, information and practical tools for parents on safe surfing and emerging media issues.



CREATIVE WRITING PROCESS (www.nzcal.com/hp/adk/)

Creative writing is a process. It starts with brainstorming for ideas, then outlining and writing a draft, and then

preparing a final copy after many proofreads and revisions. The Creative Writing Process is a handy site aimed at youth that outlines the steps in creative writing, and features exercises and helpful tips.




THE TEACHER LIST (www.theteacherlist.ca/)

Possibly the most extensive list of teacher resources on the Internet, The Teacher List divides its vast archive of useful Web sites by age group and subject. Whether you're looking for learning resources, teaching aids or Web sites for your students to explore, you'll find what you're looking for at The Teacher List.



CBC4KIDS (www.cbc4kids.ca)

Are you looking for a way to share the news with your students in a fun and interactive way? Check out CBC4Kids, a news site designed for youth.



GRADE 12 MATH PROBLEMS (<http://juliet.stfx.ca/people/fac/pwang/mathpage/grade12.html>)

If you are a math teacher preparing your Grade 12 students for their provincial math exams, this site offers exam-style questions, with hints and explanations of how to solve mathematical problems.



NATIONAL LIBRARY OF CANADA KIDS PAGE

(www.nlc-bnc.ca/kids/index-e.html)

With more than 50 unique sites on everything from the Canadian history of hockey to the creation of a book for children, teachers will find learning resources kids love at the National Library of Canada Kids Page.

UN CYBER SCHOOLBUS

(www.un.org/Pubs/CyberSchoolBus/index.asp)

With more than 180 members, the United Nations brings together countries of different origins, cultures and political beliefs to work together for the betterment of citizens across the globe. The UN Cyber Schoolbus provides lesson plans, activities and games perfect for educating students about the UN and the ideals it represents.

GEOMETRY STEP BY STEP: FROM THE LAND OF THE INCAS (<http://agutie.homestead.com/files/index.html>)

Using the fascinating history of the Inca people as a backdrop, this in-depth Web site teaches the concepts of geometry in a fun, accessible manner.

Bryce Fountain is on special assignment with Canada's SchoolNet.

Ericsson is a proud
sponsor of the
Canada's SchoolNet
GrassRoots initiative

To see great examples of SchoolNet
GrassRoots projects about technology
education, please visit the Ericsson
Project Gallery at

www.ericsson.ca/Canada/ProjectGallery/ProjectGallerySchoolNet.aspx

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Canada

Take Part in a **SCHOOLNET GRASSROOTS** Sponsored Theme Project!

WOULD YOU LIKE to see your students work on interactive online learning activities? If so, SchoolNet invites you to take part in its SchoolNet GrassRoots Sponsored Theme Projects!

SchoolNet GrassRoots Sponsored Theme Projects — created in partnership with private sector sponsors — are a great opportunity for you and your class to take part in a variety of Canadian online projects related to a specific theme, resource or area of study.

By participating, your class will be creating its own curriculum-relevant online resources and be eligible to receive funding through the Canada's SchoolNet GrassRoots initiative, a unique initiative that offers K-12 schools funding to create collaborative e-learning projects!

Theme Projects:

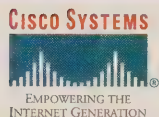


The **Money \$marts** theme project, presented by the Investor e-education Fund, invites students to develop a project related to commercial studies, economics or mathematics. Schools who successfully finish their Money \$marts projects qualify to win an Investor e-education Fund prize package.

Imperial Oil



The **Right Chemistry** project, presented by Imperial Oil, teaches students about chemistry and science through technology.



The **Cisco Networking Academy** Program, presented by Cisco Systems Canada Co., invites Canadian teachers and students to learn about the Networking Academy and encourages Networking Academy schools to create SchoolNet GrassRoots projects.



The **All Aboard for SAFETY** theme project, presented by CN, is aimed at educating students about safety-related issues.



The **Art of Design**, Corel's theme project, is aimed at educating students about art through the use of technology.



AOL Canada proudly invites all Canadian K-12 teachers and students to participate in **Canada First**, a fantastic new GrassRoots theme project that celebrates Canadian excellence in all areas. **Canada First** is your opportunity to share your Canadian story with other teachers and students across the country.

To find out more about SchoolNet GrassRoots Sponsored Theme Projects, visit
www.schoolnet.ca/grassroots/e/project.centre/theme/index.asp

Sharing Skills and Knowledge Through Mentoring

By Denise Dennis

SKILL SETS ASSOCIATED WITH VIDEOCONFERENCING, Web design and other new technologies are project elements that many teachers need to become familiar with. But how do they do it without paying big bucks? Several schools have discovered that mentoring is one of the best ways to achieve this professional development goal.

"Mentoring is one of the most comfortable and efficient ways to pass along information," explains John McNeil, principal of Bedford Junior High School in Nova Scotia. "Comrades and colleagues work in the same areas so they understand teachers' needs when it comes to applying information technology to the classroom."

Departments of education, school boards and teachers all agree that mentoring is an effective way for educators to become familiar with computer technology. "Experienced, practising teachers who have successfully integrated technology in their schools are the best mentors for teachers who are learning to integrate technology," explains Ruth Giberson, a New Brunswick special education teacher.

Teachers at Bedford Junior High attended a series of afternoon workshops presented by their colleagues. "In the computer lab, they were able to work on their individual classroom projects and ask questions throughout the tutorial," says McNeil.

A school board in New Brunswick hired 12 teachers to act as mentors. These mentors are available for in-class assistance, after-school presentations and even individual mentoring.

"Some teachers want to learn everything they can about technology and jump at the opportunity to learn more; others see it as a professional investment. They need to learn more to be able to teach their students properly. Either way, getting teachers involved with learning and teaching does not seem to be a problem," says McNeil.

While mentoring encourages nurturing relationships and the sharing of information, it also enhances a professional culture. Mentoring is beneficial to both the teacher and learner. Gary Parks has been a teacher for more than 30 years and has spent the last year as a mentor in New Brunswick. He is filled with excitement as he describes his mentoring experience as a year of self-improvement.

"Taking a year to be a mentor is like going on sabbatical to get your master's degree. You get to learn new software programs, enter classrooms you are not familiar with, and meet new people." Now, teachers who were once reluctant to teach technology have the support of mentors both in and out of the classroom.

By using the skills available within the education community, teachers are able to maximize learning opportunities. Many mentoring programs are informal and start with a group of teachers getting together to share information and expertise. The mentoring programs at Bedford Junior High and in New Brunswick are excellent examples of what can be accomplished!

Denise Dennis is on special assignment with Canada's SchoolNet.



NetCorps Canada International:

A Valuable Employment and International Development Tool

By Philippe Denis

WHO COULD HAVE PREDICTED that one day, Industry Canada's NetCorps Canada International would be celebrating its 1000th placement?

NetCorps provides young people with exciting volunteer internship opportunities in the area of information and communications technologies in more than 70 developing countries. It is a golden opportunity for young people ages 19 to 30 to gain the work experience they need to confront the reality of the working world, where a lack of experience often prevents them from getting jobs.

Last fall, Olivier Asselin, NetCorps Canada's 1000th volunteer, had one of those internships, providing video production support and training to a Senegalese non-governmental organization. In addition, Asselin documented what awaits volunteers in the field. "My goal was to prepare an overall picture of what NetCorps volunteers do. Starting in Dakar and then travelling to Togo and Burkina Faso, I created seven video postcards featuring NetCorps interns and showing the wonderful work they are doing." (To view the video postcards, visit www.netcorps-cyberjeunes.org/english/youth_e.htm)

The volunteers Asselin met have a wide variety of mandates. "It depends on the volunteer, the needs of the organization and the resources available on site," he says. "The work done by NetCorps participants ranges from designing Web sites and formatting newspapers in the local language, to creating databases and networking computers."

Whether to learn a new language or for professional development or cultural exchange purposes, volunteers rise to numerous challenges, acquiring skills that will prove invaluable in the labour market. "The experience is totally different for each participant, but I believe everyone wins, personally or professionally. You can't walk away from an experience like that without being affected," says Asselin.

The program has also won kudos from Canadian employers. "You can see the advantage this kind of program provides when you look at the volunteers who have completed it. For example, Karina, who I met in Togo, found a job almost as soon as she got back to Canada," Asselin reports.

NetCorps' effectiveness is largely due to its partnerships with some of Canada's largest international development organizations, including Canada World Youth, Alternatives, Canadian Crossroads International, Canadian Society for International Health, CUSO, Human Rights Internet, Oxfam-Québec,

Voluntary Services Overseas and World University Services of Canada.

The program's advantages are felt by the young Canadians who derive enormous professional benefit, and by the partner organizations and countries that benefit from their hard work. The program is conducted as an exchange, with special emphasis on training. Volunteers must be able to transfer knowledge that partners can continue using once the interns have left.

"What is so great about this program is how it benefits everyone in Canada and abroad, creating links and building on solid foundations," Asselin concludes.

Philippe Denis is on special assignment with NetCorps Canada International.

*"Education is not the
filling of a pail, but the
lighting of a fire"*

William Butler Yeats

Education. It's the main building block for a better future. At Bell, we will continue to form partnerships like this one with Canada's SchoolNet Network of Innovative Schools to help bring people of all ages and walks of life together in a learning environment. Because with good education and the right resources, we enrich our communities and our way of life.



BELL IS A PROUD SPONSOR OF CANADA'S
SCHOOLNET NETWORK OF INNOVATIVE SCHOOLS

No Talking? Not Here!



OVER THE PAST DECADE, technological changes have affected all aspects of the school library. Libraries are no longer just for gathering print material. Today's libraries include digital book collections and CD-ROMs of newspaper clippings, with students searching electronic databases for professional journal articles, and students, teachers and staff communicating through e-mail.

Nell Ududec has been a teacher-librarian at Bairdmore Elementary School in Winnipeg for more than 11 years, and she says she has seen some amazing changes in that time. "We started out with one computer that was used by teachers, students and library staff. Our library still worked on a card catalogue system and the Internet was clumsy and difficult to use. Today, our library is fully computerized and has eight computers — although most of these are still in need of updating."

There are many benefits to having an innovative library in your school. For instance, schools now have access to endless amounts of research materials. Students not only enhance their reading skills in the library, they are also constantly learning new research skills by accessing the latest online encyclopedias and databases. Innovative libraries are also beneficial to teachers. With more resources available for developing lesson plans, such as online educational quizzes, games and tests, teachers are able to produce more interactive learning environments.

Although there are many benefits to having an innovative library, there are also challenges associated with integrating technology in this setting. First, teaching students how to search the Internet, monitoring what they search, and judging whether the research they find is valid can be demanding. "One of our greatest challenges is finding a way to structure, monitor and guide student research online," explains teacher Patrick Vossen of Burnaby North Secondary School in British Columbia. Vossen says that providing students with online curriculum links for each classroom subject is a great solution to the problem. Students' computer usage should always be monitored, Vossen says, by having a teacher or librarian in the computer lab.

Another common problem librarians face is teaching students how to properly cite their sources. To help students reference online material, teacher-librarians Mona-Lynne Howden, from Vincent Massey Collegiate, and Joan Marshall, from Fort Richmond Collegiate, both in Manitoba, developed a research strategy plan, which includes a section on how to accurately cite references (www.pembinatrails.ca/fortrichmondcollegiate/library/index.html).

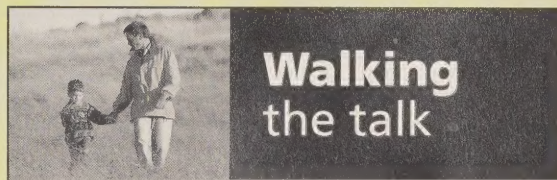
Welcome to the Innovative Library

By Denise Dennis

Keeping technology resources working and up to date is another common challenge. A good solution is to develop a technology plan that will enable your school to maximize the use of "antiquated" equipment. For example, in Burnaby North's library, two older 486 computers have been dedicated as Online Public Access Catalogue stations, while the newer machines provide access to the Internet and other software resources.

So what's the verdict? No matter how you look at it, the benefits of integrating technology into libraries far outweigh the challenges. Libraries are changing with technology and providing educators and learners with access to more resources and knowledge than ever before.

Denise Dennis is on special assignment with Canada's SchoolNet.



At TransCanada we do more than talk about caring for the environment. We continue to look for environmental solutions in all areas of our business.

As a leader in the energy sector and as responsible corporate citizens, we are working to help conserve this country's valued natural resources.

Through our support of Canada's SchoolNet GrassRoots initiative, TransCanada is helping Canadian students broaden their awareness of environmental issues by helping them create online projects that explore ecology both locally and globally.

To view SchoolNet GrassRoots projects about the environment, please visit www.schoolnet.ca/grassroots/e/project.centre/Project.gallery/environment.asp



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BULLYING:

Confronting the Issue

By Kristen Torno

FROM TEXTBOOKS TO TESTS, education is constantly evolving with technology. One characteristic of the schoolyard, however, never wavers, bullying. Until recently, technological applications have had little effect on the schoolyard. Bullying is still a harsh reality for many youth.

In the average school, bullying occurs once every seven minutes on the playground, and once every 25 minutes in the classroom. A recent study published in the *Canadian Journal of School Psychology* reports that 27 percent of the study's respondents said they had been both physically and verbally abused, while 21 percent reported verbal bullying and five percent reported physical abuse.

WHAT CAN BE DONE?

Bullying is difficult to deal with because it is not always recognized. Bullying is more than just physical or verbal attacks on peers; it may also include gossiping and excluding peers from play or social groups.

Without knowing it, students sometimes encourage bullying by not helping victims, and not reporting the bullying to a parent or teacher.

As an educator, you know that no two students or situations can be handled in the same manner. Likewise, there is no "one size fits all" solution for bullying. Many schools have begun to realize this, and are creating their own innovative solutions for dealing with bullying, some of which use technology.

Whitewood School and Broadview School, both in Saskatchewan, have always had problems with bullying. But

in 2002, the schools decided to make bullying a prominent topic in the classroom through the use of new technologies. With the help of the Canada's SchoolNet GrassRoots initiative, students from both schools collaboratively created an Internet site about bullying.

The site — Bullying: As Seen Through the Eyes of the Students (www.saskschools.ca/~whitschl/grassroots-2002/) — explores the effects of bullying on students, as well as warning signs, solutions and prevention methods. It also gives students support through a peer action plan to deal with bullying.

"The project made students more aware of the implications of bullying," says Todd Butler, Whitewood School principal. "It was especially useful because students knew their content was going to be posted online for the whole world to see. It took on a new level of importance."

Two other great sites that explore bullying are bullying.org (www.bullying.org), and Be Bright Think Right (www.scouts.ca/bbtr/ba.html). Bullying.org serves as a creative outlet for students to post poems, drawings, songs and stories about their experiences with bullying. Be Bright Think Right discusses what bullying is, how to deal with it, and how to help prevent it. The ultimate goal of both sites is to bring an end to all-too-common feelings of solitude resulting from bullying that can lead to withdrawal, depression and, sometimes, suicide.

As many schools are realizing, raising the awareness of what constitutes bullying can go a long way toward developing more proactive attitudes. Bullying will never completely disappear, but by working together, students and schools can help minimize its effects and ensure students come to school feeling secure.

This is one schoolyard battle that's worth fighting.

Kristen Torno is on special assignment with Canada's SchoolNet.

Ask an Expert

TEACHERS, do you have questions about how to integrate robotics, videoconferencing or other new technologies into your classroom? Look no further for answers than **Ask an Expert!**

Each month, the Canada's SchoolNet Network of Innovative School's Ask an Expert connects you to technology-savvy Canadian educators who can answer questions on anything from creating an atmosphere of innovation for your school, to television production and Web design.

To find out more, visit www.schoolnet.ca/nis-rei/e/

Your way. Safer.

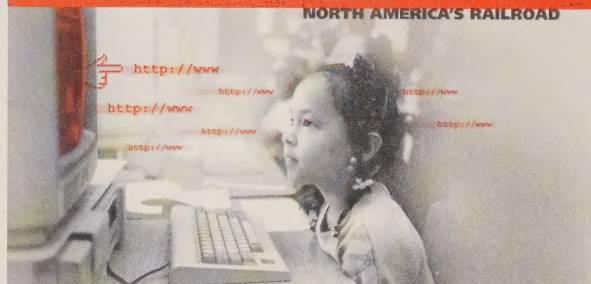
Create a Web-based safety project for your school.

CN invites you and your students to develop a SchoolNet GrassRoots safety project and earn from \$300 to \$5500 for your school.

For complete details, check out www.schoolnet.ca/grassroots/e/showcase/cn



NORTH AMERICA'S RAILROAD



Cash, coin, dollars, dinero... For your SchoolNet GrassRoots Theme Project, think money!



The new Money \$marts Theme Project helps students combine financial literacy and information technology (IT).

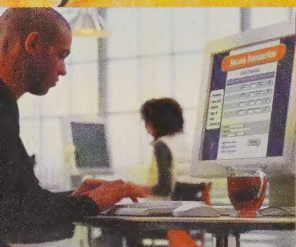
Your students can win fantastic prize packages while developing their financial and IT skills. They can also qualify for the *Top of the Class* competition, recognizing outstanding projects across Canada.

To find out more, visit the Money \$marts Theme Project Web site:
www.schoolnet.ca/grassroots/e/project.centre/theme/investor



SCHOOLNET GRASSROOTS

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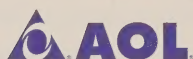


BUILDING INFORMATION TECHNOLOGY SKILLS FROM THE GRASSROOTS UP

The private sector has played an important role in helping Canadian students harness information and communications technologies through the Industry Canada SchoolNet GrassRoots initiative. SchoolNet GrassRoots gratefully acknowledges the support of its corporate sponsors whose generous contributions have helped fund thousands of GrassRoots projects involving millions of students from across Canada.

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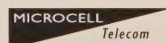
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